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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,425	10/24/2003	Thomas Dwayne Nixon	4865/133	2027
7590	01/06/2006		EXAMINER	
			GROUP, KARL E	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/693,425	NIXON ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Karl E. Group	1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 23 November 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 14-16, 18-25, 33-40, 42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 14-16, 18-25, 33-40, 42 and 43 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-23-05 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14, the terminology "initially predominantly coating the fibers of that fiberous structure perform with elemental carbon to impregnate that perform with elemental carbon" is considered to render the claim indefinite because it is not clear if a coating step or an impregnating step or both is occurring. Coating is not considered equivalent to impregnating.

Also in step (a) "fibers" was deleted from the claim therefor carbon, polyacrylonitrile or rayon FIBERS are not required.

***Claim Rejections - 35 USC § 102 and 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 14-16,18-25,33-40,42 and 43 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C..103(a) as obvious over Gruber et al (6,537,654).

Gruber et al teach a SiC-Si-carbon fiber composite where the fibers are coated with a layer of graphite, column 8, lines 53-65. The carbon fibers are coated with carbon or graphite to protect the fiber from the silicon, column 6, lines 3-21 and is included in the composite in amounts of 10-40 wt%. The fibers may further be polyacrylonitrile, column 6, lines 36-37. In addition to the fibers boron carbide is added to further increase the hardness of the composite, column 12, lines 7-25. Any modification of the boron carbide particle size is within the level of ordinary skill in the art. Gruber et al fail to disclose the grain size of the silicon carbide however, it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); *In re Swinehart*, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

6. Claims 25,33-40,42 and 43 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese document 200256064, translation included.

It is noted that the rejected claims fail to require the fibers be coated with elemental carbon. The Japanese document coats the fibers in thermoplastics.

The Japanese document teaches a SiC-Si composite including carbon fibers and boron carbide, see abstract. The Japanese document fails to disclose the grain size of the silicon carbide however, it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

7. Fehrenbacher et al (6,506,483) is cited as prior art of interest for teaching carbon fibers that are coated with pyrolytic carbon to allow for debonding.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl E. Group whose telephone number is 571-272-1368. The examiner can normally be reached on M-F (6:30-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl E Group  
Primary Examiner  
Art Unit 1755

Keg  
1-3-06